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Made by SFA Companies, Kansas City, MO

Hydraulic Transmission Jacks

Operating Instructions & Parts Manual

Model	Capacity
BH7011	1/2 Ton
BH7210	1 Ton

SFA Companies
10939 N. Pomona Ave. Kansas City, MO 64153
sales@blackhawk-automotive.com



This is the safety alert symbol. It is used to alert you to potential personal injury hazards.
Obey all safety messages that follow this symbol to avoid possible injury or death.

Read this manual and follow all the Safety Rules and Operating Instructions before using this product.

Made in PRC
BH7011-M0 rev 08/07

Save these instructions. For your safety, read, understand, and follow the information provided with and on this jack. The owner and operator shall have an understanding of this jack and safe operating procedures before attempting to use. The owner and operator shall be aware that use and repair of this product may require special skills and knowledge. Instructions and safety information shall be conveyed in the operator's native language before use of this jack is authorized. If any doubt exists as to the safe and proper use of this jack, remove from service immediately. **Inspect before each use.** Do not use if broken, bent, cracked, or damaged parts (including labels) are noted. Any jack that appears damaged in any way, operates abnormally or is missing parts, shall be removed from service immediately. If the jack has been or suspected to have been subjected to a shock load (a load dropped suddenly, unexpectedly upon it), immediately discontinue use until jack has been checked by a Blackhawk authorized service center. It is recommended that an annual inspection be done by qualified personnel. Replace worn or damaged parts and assemblies with Blackhawk Authorized Replacement Parts only. Labels and Operator's Manuals are available from manufacturer.

PRODUCT DESCRIPTION

Blackhawk Hydraulic Transmission Jacks are designed to be used as an aid in the removal and installation of automotive and light truck transmissions, transfer cases and transaxles. These jacks are for use under portable lift equipment, where vehicle must be supported by appropriately mechanical support.

DO NOT USE FOR ANY PURPOSE OTHER THAN THOSE USES OUTLINED ABOVE !

SPECIFICATIONS

Model	Capacity	Min. Height	Max. Height	Saddle Base	Extended Saddle Area	Jack Size	Net Weight
BH7011	1/2 Ton	8 1/2"	24 3/4"	12 5/8" x 7 7/8"	17" x 9 3/8"	31" x 15"	93 lb
BH7210	1 Ton	7 7/8"	33 1/2"	14 1/4" x 7 7/8"	17" x 15 1/2"	40 3/8" x 19 1/8"	187 lb

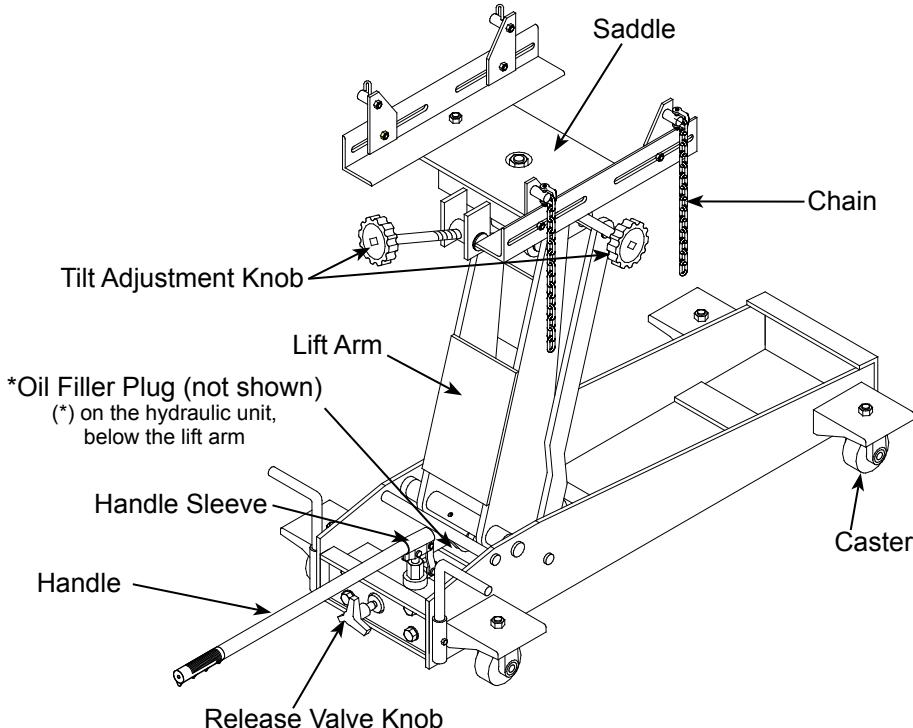


Figure 1- Typical Transmission Jack Components BH7210 shown)

BEFORE USE

1. Verify that the product and the application are compatible, if in doubt call Blackhawk Automotive Technical Service (816) 891-6390.
2. Before using this product, read the operator's manual completely and familiarize yourself thoroughly with the product, its components and recognize the potential hazards associated with its use.
3. Open the release valve by turning the release valve knob counter-clockwise (no more than 1/2 full turn).
4. With lifting arm fully lowered, locate and remove the oil filler plug. Pump handle 6 to 8 full strokes. Ensure the oil level is within ~3/16" from the inner cylinder as viewed from the oil filler hole. Reinstall the oil filler plug. Close release valve by turning it clockwise until firm resistance is felt.
5. Check to ensure that jack rolls freely, that the pump and release valve operate smoothly. Raise and lower the unloaded jack throughout the advertised lift range before putting into service.
6. Replace worn or damaged parts and assemblies with manufacturer authorized replacement parts only. Lubricate as instructed in Maintenance Section.

WARNING

- Study, understand, and follow all printed materials provided with/on this product before use.
- Do not exceed rated capacity.
- Use only on hard, level surface.
- Use of this jack is limited to the removal, installation and transportation of transmissions, transfer cases and transaxles. Do not use a transmission jack to tilt or support a vehicle.
- Ensure the center gravity of load is centered on the saddle.
- For your safety, do not exceed 10 degree tilt angle of the saddle assembly in all directions.
- Adequately support the vehicle before starting repairs.
- Use only chains, slings, attachments and/or adapters supplied by the manufacturer.
- If loaded jack must be moved, make sure that the load is secured, stable and in lowest position.
- Transfer load immediately to appropriate support device for service or repair.
- Shock loads may cause the sudden loss of load and/ or cause the jack to tip or flip over violently, bend or break.
- No alterations shall be made on this product.
- Failure to heed these markings may result in personal injury and/or property damage.

OPERATION

Raise saddle:

1. Locate and close release valve by turning knob clockwise firmly, then pump the handle until the load is contacted.
2. Follow vehicle manufacturers recommended procedures for removing the load as outlined in vehicle service manual or repair guide.
3. Secure load with provided restraints. Ensure load's center of gravity is centered on the saddle and load is stable before moving jack.

Lower saddle:

WARNING

Be sure all tools and personnel are clear before lowering load.

Caution! Dynamic shock loads are created by quickly opening and closing the release valve as the load is being lowered. The resulting overload may cause hydraulic system failure.

1. Slowly, gently turn the release valve knob counter-clockwise, never more than 1/2 full turn until the load is completely lowered.
2. Immediately transfer the load to an appropriate repair fixture.

MAINTENANCE

Important: Use only good grade hydraulic jack oil. Avoid mixing different types of fluid and NEVER use brake fluid, turbine oil, transmission fluid, motor oil or glycerin. Improper fluid can cause premature failure of the jack and the potential for sudden and immediate loss of load. We recommend Hein-Werner HW93291 or equivalent hydraulic jack oil.

Adding oil

1. With lifting arm fully lowered set jack in its upright, level position. Locate and remove oil filler plug.
2. Fill with oil until ~3/16" above the inner cylinder as seen from the oil filler hole. Reinstall oil filler plug.

Changing oil

For best performance and longest life, replace the complete fluid supply at least once per year.

1. With lifting arm fully lowered, remove oil filler plug.
2. Lay the jack on its side and drain the fluid into a suitable container.

Note. Dispose of hydraulic fluid in accordance with local regulations.

3. Set jack in its level position. Fill with oil until ~3/16" above the inner cylinder as seen from the oil filler hole. Reinstall oil filler plug.

Lubrication

A periodic coating of light lubricating oil to pivot points, axles and hinges will help to prevent rust and assure that casters and pump assemblies move freely.

TROUBLESHOOTING

Symptom	Possible Causes	Corrective Action
Jack will not lift load	<ul style="list-style-type: none">• Release valve not tightly closed• Overload condition	<ul style="list-style-type: none">• Ensure release valve tightly closed• Remedy overload condition
Jack will lift, but not maintain pressure	<ul style="list-style-type: none">• Release valve not tightly closed• Overload condition• Hydraulic unit malfunction	<ul style="list-style-type: none">• Ensure release valve tightly closed• Remedy overload condition• Contact Tech. Service
Jack will not lower after unloading	<ul style="list-style-type: none">• Reservoir overfilled• Linkage binding	<ul style="list-style-type: none">• Ensure load is removed, then drain fluid to proper level• Clean and lubricate moving parts
Poor lift performance	<ul style="list-style-type: none">• Fluid level low• Air trapped in system	<ul style="list-style-type: none">• Ensure proper fluid level• With saddle fully lowered, remove oil filler plug to let pressurized air escape, then reinstall oil filler plug
Jack will not lift to full extension	<ul style="list-style-type: none">• Fluid level low	<ul style="list-style-type: none">• Ensure proper fluid level

Cleaning

Periodically check the pump piston and ram for signs of rust or corrosion. Clean as needed and wipe with an oily cloth.

Note: Never use sandpaper or abrasive material on these surfaces!

Storage

When not in use, store the jack with saddle fully lowered.

REPLACEMENT PARTS

(refer to page 5 thru 7)

Not all components of the jack are replacement items, but are illustrated as a convenient reference of location and position in the assembly sequence. When ordering parts, give Model number, serial number and parts description. Call or write for current pricing: SFA Companies, 10939 N. Pomona Ave. Kansas City, MO 64153, U.S.A. Tel:(816)891-6390 Fax:(816)891-6599 E-Mail: sales@blackhawk-automotive.com

Replacement Parts for Model BH7011

Item	Part No.	Description	Qty.
1	4500-01000-000	Hydraulic Unit	1
2	5905-00100-100	Filler Plug	1
3	5905-00091-000	Oil Seal	1
4	4500-90009-K03	Release Valve	1
5	4500-01004-000	Pump Cylinder	1
6	4500-01301-000	Pump Piston	1
7	5403-10038-000	Pin	1
8	5403-08038-000	Pin	1
9	4500-01008-000	Handle Socket	1
10	B020-10003-000	Filter	1
11	4500-00004-000	Pivot Pin, Hyd Unit	2
12	4500-02000-000	Handle Assembly	1
13	BL80-20002-000	Handle Grip	1
14	4500-90009-K02	Caster Assembly	4
15	4500-03000-000	Saddle Assembly	1
16	4500-03300-000	Angle Bar	2
17	4500-03100-000	Toe I	2
18	4500-03200-000	Toe II	2
19	4500-03001-000	Joint	2
20	5207-00006-000	Wing Nut, M6	2
21	5207-00010-000	Wing Nut, M10	4
22	4500-03002-000	Chain	1
23	5202-00010-000	Nut	4
24	4500-03600-000	Tilt Screw	1
25	5202-00012-001	Nut, M12	1
*	45000S-071	Seal Kit, Hyd Unit	-

(*) Seal Kit Contents:		
Item	Description	Qty.
2	Filler Plug	1
3	Oil Seal	1
A	O-ring	1
B	O-ring	1
C	Back-up Ring	1
D	U-cup	1
E	Back-up Ring	1
F	O-ring	1
G	Back-up Ring	1
H	O-ring	1
I	Seal	1
J	O-ring	1

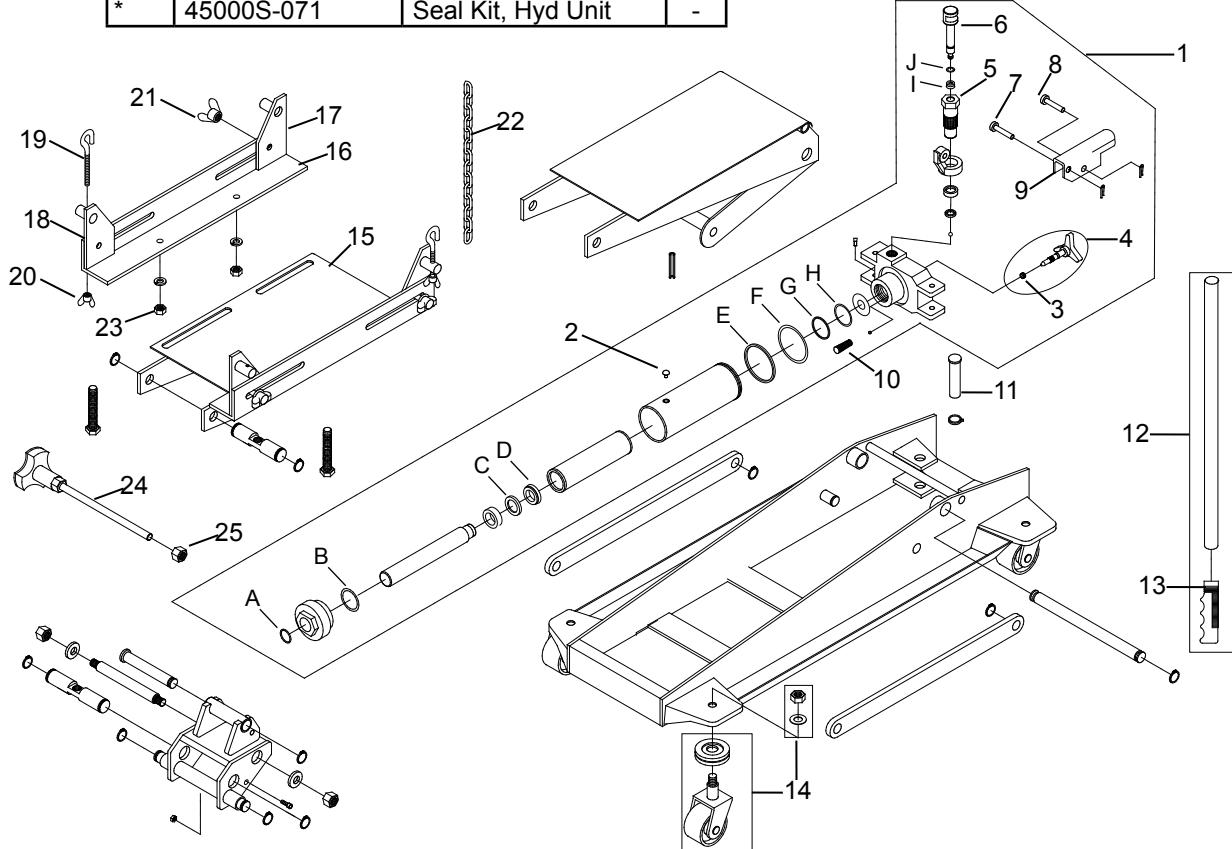


Figure 2 - Replacement Parts Illustration for Model BH7011

Replacement Parts Illustration for Model BH7210

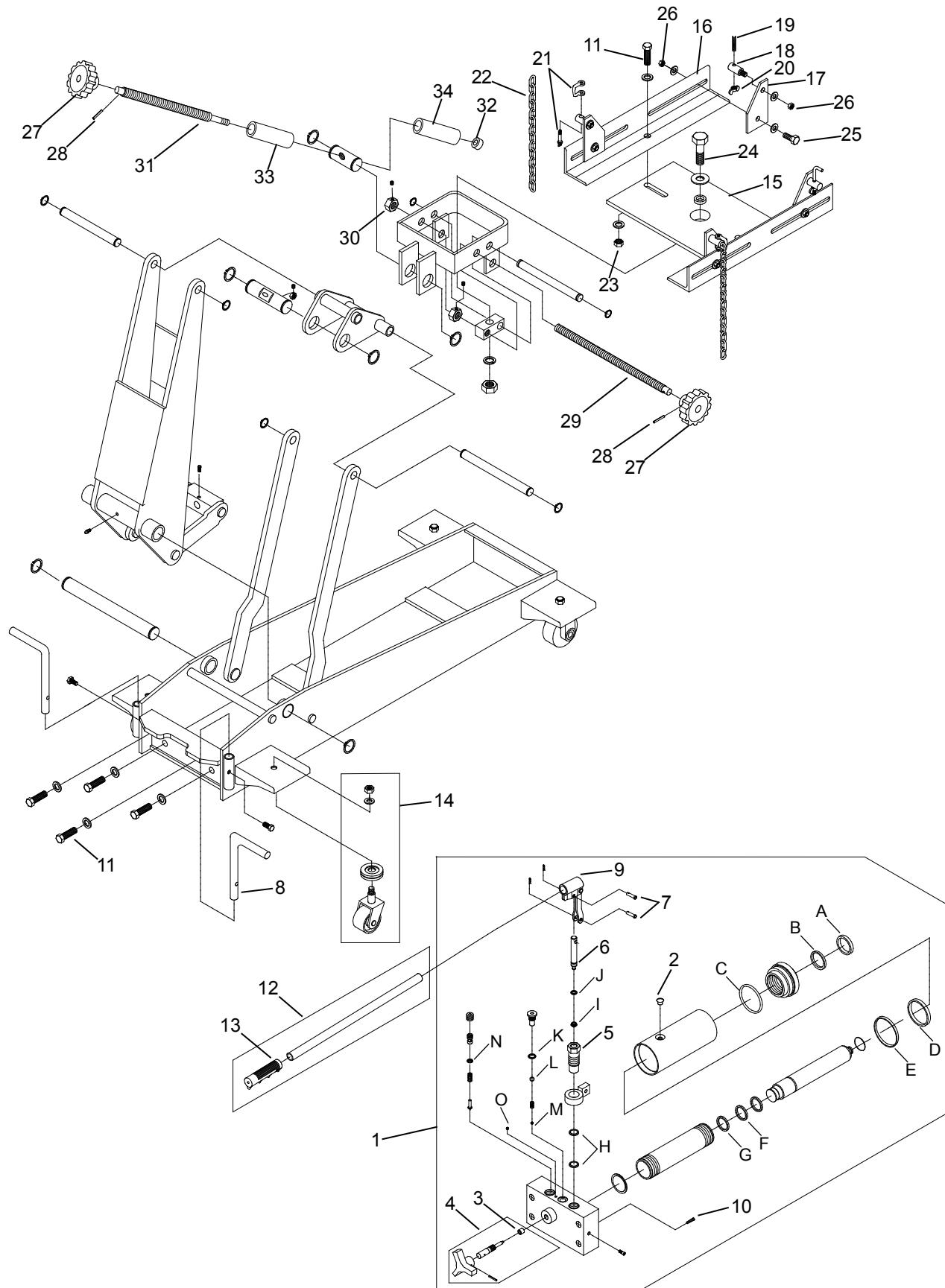


Figure 3 - Replacement Parts Illustration for Model BH7210

Replacement Parts List for Model BH7210

Item	Part No.	Description	Qty.
1	4200-01000-000	Hydraulic Unit	1
2	5905-00100-100	Filler Plug	1
3	5905-00056-000	Oil Seal	1
4	4200-90009-K02	Release Valve	1
5	4200-01002-000	Pump Cylinder	1
6	4200-01401-000	Pump Piston	1
7	5405-07027-000	Pin	2
8	4200-00001-000	Handle Bar	2
9	4200-01300-000	Handle Socket	1
10	B020-10003-000	Filter	1
11	5102-12035-000	Hex. Bolt, M12	6
12	4500-02000-000	Handle Assembly	1
13	BL80-20002-000	Handle Grip	1
14	4200-90009-K01	Caster Assembly	4
15	4200-03100-000	Saddle Plate	1
16	4200-03007-000	Angle Bar	2
17	4200-03010-000	Toe	4
18	4200-03003-000	Hook Screw	4
19	4200-03011-000	Hook	2
20	5207-00008-000	Wing Nut, M8	2
21	4200-03600-000	Hook	2
22	4200-03004-000	Chain	2
23	5202-00012-001	Nut, M12	2
24	5103-16065-000	Hex. Bolt, M16	1
25	5102-10025-000	Hex. Bolt, M10	4
26	5202-00010-000	Nut	8
27	4200-03401-000	Knob	2
28	5402-04025-000	Spring Pin	2
29	4200-03402-000	Tilt Screw	1
30	4200-03013-000	Nut	2
31	4200-03501-000	Tilt screw	1
32	K040-03000-100	Bearing	1
33	4200-03015-000	Tube I	1
34	4200-03016-000	Tube II	
*	42000S-102	Seal Kit, Hyd Unit	-

(*) Seal Kit Contents:		
Item	Description	Qty.
2	Filler Plug	1
3	Oil Seal	1
A	Seal	1
B	U-cup	1
C	O-ring	1
D	Back-up Ring	1
E	Seal	1
F	Back-up Ring	1
G	U-cup	1
H	O-ring	2
I	Seal	1
J	O-ring	1
K	O-ring	1
L	Steel Ball	1
M	Steel Ball	1
N	O-ring	1
O	Steel Ball	1



ONE YEAR LIMITED WARRANTY

For a period of one (1) year from date of purchase, SFA Companies will repair or replace, at its option, without charge, any of its products which fails due to a defect in material or workmanship under normal usage. This limited warranty is a consumer's exclusive remedy.

Performance of any obligation under this warranty may be obtained by returning the warranted product, freight prepaid, to SFA Companies Warranty Service Department, 10939 N. Pomona Ave., Kansas City, MO 64153. Except where such limitations and exclusions are specifically prohibited by applicable law.

- (1) THE CONSUMER'S SOLE AND EXCLUSIVE REMEDY SHALL BE THE REPAIR OR REPLACEMENT OF DEFECTIVE PRODUCTS AS DESCRIBED ABOVE.
- (2) SFA COMPANIES SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGE OR LOSS WHATSOEVER.
- (3) ANY IMPLIED WARRANTIES, INCLUDING WITHOUT LIMITATION THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, SHALL BE LIMITED TO ONE YEAR, OTHERWISE THE REPAIR, REPLACEMENT OR REFUND AS PROVIDED UNDER THIS EXPRESS LIMITED WARRANTY IS THE EXCLUSIVE REMEDY OF THE CONSUMER, AND IS PROVIDED IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED.
- (4) ANY MODIFICATION, ALTERATION, ABUSE, UNAUTHORIZED SERVICE OR ORNAMENTAL DESIGN voids THIS WARRANTY AND IS NOT COVERED BY THIS WARRANTY.

Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.